

METHOD FOR ADAPTIVE SEGMENT RE-FINEMENT IN OPTICAL PROXIMITY CORRECTION

Abstract

A method of designing lithographic masks is provided where mask segments used in a model-based optical proximity correction (MBOPC) scheme are adaptively refined based on local image information, such as image intensity, gradient and curvature. The values of intensity, gradient and curvature are evaluated locally at predetermined evaluation points associated with each segment. An estimate of the image intensity between the local evaluation points is preferably obtained by curve fitting based only on values at the evaluation points. The decision to refine a segment is based on the deviation of the simulated image threshold contour from the target image threshold contour. The output mask layout will provide an image having improved fit to the target image, without a significant increase in computation cost.